

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently amended) A method for treating laundry, the method comprising steps of:
 - (a) applying a bleaching and antimicrobial composition to the laundry in a laundry washing machine at a first second pH that favors bleaching properties from about 2 to about 8 and thereafter at a second first pH that favors antimicrobial properties from about 5 to about 11, wherein the first pH and the second pH are different; and
 - (b) draining the bleaching and antimicrobial composition from the laundry.
2. (Currently amended) A method according to claim 1, wherein the treatment bleaching and antimicrobial composition comprises a detergent composition for removal of soil from the laundry.
3. (Original) A method according to claim 1, further comprising:
 - (a) washing the laundry with a detergent use solution in a laundry washing machine prior to the step of applying a bleaching and antimicrobial composition to the laundry.
4. (Original) A method according to claim 3, further comprising:
 - (a) draining at least a portion of the detergent use solution from the laundry washing machine prior to the step of applying a bleaching and antimicrobial composition to the laundry.
5. (Canceled)

6. (Original) A method **according to claim 1**, wherein the step of applying a **bleaching and antimicrobial composition to the laundry** in a laundry wash machine comprises **bleaching at the first pH for between about 1 minute and about 20 minutes, and providing antimicrobial properties at the second pH for between about 1 minute and about 20 minutes.**
7. (Canceled)
8. (Canceled)
9. (Original) A method **according to claim 1**, wherein the step of applying a **bleaching and antimicrobial composition to the laundry** comprises **adding a pH adjusting agent to increase the pH from the second pH to the first pH.**
10. (Original) A method **according to claim 9**, wherein the **pH adjusting agent** comprises at least one of **alkaline metal hydroxide, alkaline metal silicate, alkaline metal carbonate, alkaline metal bicarbonate, alkaline metal sesquicarbonate, and alkaline metal borate.**
11. (Original) A method **according to claim 1**, wherein the **bleaching and antimicrobial composition** comprises **a coated pH adjusting agent that introduces the pH adjusting agent once the coating has degraded.**
12. (Original) A method **according to claim 1**, wherein the step of applying comprises **adding a pH adjusting agent to change the pH between the first pH and the second pH.**
13. (Original) A method **according to claim 1**, wherein the **bleaching and antimicrobial composition** comprises **at least one of a halogen bleach and an oxygen bleach.**
14. (Original) A method **according to claim 13**, wherein the **halogen bleach** comprises **at least one of chlorine dioxide, potassium dichloroisocyanurate, sodium dichloroisocyanurate, chlorinated trisodiumphosphate, sodium hypochlorite, calcium hypochlorite, lithium hypochlorite, monochloramine, dichloroamine, [(monotrichloro)-tetra (monopotassium**

dichloro)]pentaisocyanurate, paratoluene sulfondichloro-amide, trichloromelamine, N-chlorammeline, N-chlorosuccinimide, N,N'-dichloroazodicarbonamide, N-chloro-acetyl-urea, N,N'-dichlorobiuret, chlorinated dicyandiamide, trichlorocyanuric acid, dichloroglycoluril, 1,3-dichloro-5,5-dimethyl hydantoin, 1-3-dichloro-5-ethyl-5-methyl hydantoin, 1-chloro-3-bromo-5-ethyl-5-methyl hydantoin, dichlorohydantoin, salts or hydrates thereof, and mixtures thereof.

15. (Original) A method **according** to claim 13, wherein the **oxygen bleach** comprises an inorganic active oxygen composition comprising at least one of hydrogen peroxide, hydrogen peroxide adduct, ozone, group IIIA active oxygen compound, group VIA active oxygen compound, group VA active oxygen compound, group VIIA active oxygen compound, and mixtures thereof.

16. (Original) A method **according** to claim 1, wherein the **bleaching and antimicrobial composition** comprises **at least** one of a peroxycarboxylic acid, an ester of peroxycarboxylic acid, an alkaline metal salt of a peroxycarboxylic acid, and adducts thereof.

17. (Original) A method **according** to claim 1, wherein the **bleaching and antimicrobial composition** comprises **at least** one of C₁-C₁₀ aliphatic peroxycarboxylic acid, salt of C₁-C₁₀ aliphatic peroxycarboxylic acid, ester of C₁-C₁₀ aliphatic peroxycarboxylic acid, and mixture thereof.

18. (Original) A method **according** to claim 1, wherein the **bleaching and antimicrobial composition** comprise **peroxyoctanoic acid**.

19. (Original) A method **according** to claim 1, wherein the **bleaching and antimicrobial composition** comprises **an activator**.

20. (Original) A method **according** to claim 1, wherein the **bleaching and antimicrobial composition** comprises **at least** one of **searing agents, fabric softening agents,**

starch, sizing agents, color-fastness **agents**, oil and water repellant agents, **water conditioning agents**, iron controlling agents, **water threshold agents**, soil releasing agents, **soil shielding agents**, optical brightening agents, **fragrances**, and mixtures thereof.

21. (Original) A method **according** to claim 1, further comprising **a step of rinsing the bleaching and antimicrobial composition from the laundry.**

22. (Canceled)

23. (Withdrawn) A **bleaching and antimicrobial composition comprising:**

(a) a bleaching/**antimicrobial** agent comprising **at least one of a halogen bleach and an oxygen bleach; and**

(b) a coated **pH adjusting** agent for adjusting the **pH of the bleaching and antimicrobial composition once the coating degrades.**

24. (Withdrawn) A **composition** according to claim 23, wherein the **pH adjusting agent comprises at least one of sulfuric acid, nitric acid, hydrochloric acid, phosphoric acid, carboxylic acid, carbon dioxide, ozone, and mixtures thereof.**

25. (Withdrawn) A **composition** according to claim 23, wherein the **pH adjusting agent comprises at least one of alkaline metal hydroxide, alkaline metal silicate, alkaline metal carbonate, alkaline metal bicarbonate, alkaline metal sesquicarbonate, and alkaline metal borate.**

26. (Withdrawn) A **composition** according to claim 23, wherein the **coating comprises a cellulose derivative.**

27. (Withdrawn) A **composition** according to claim 23, wherein the **bleaching/antimicrobial agent comprises at least one of chlorine dioxide, potassium dichloroisocyanurate, sodium dichloroisocyanurate, chlorinated trisodiumphosphate, sodium hypochlorite, calcium hypochlorite, lithium hypochlorite, monochloramine, dichloroamine,**

[(monotrichloro)-tetra (monopotassium dichloro)]₅pentaisocyanurate, paratoluene sulfondichloro-
amide, trichloromelamine, N-chlorammeline, N-chlorosuccinimide, N,N'-
dichloroazodicarbonamide, N-chloro-acetyl-urea, N,N'-dichlorobiuret, chlorinated
dicyandiamide, trichlorocyanuric acid, dichloroglycoluril, 1,3-dichloro-5,5-dimethyl hydantoin,
1-3-dichloro-5-ethyl-5-methyl hydantoin, 1-chloro-3-bromo-5-ethyl-5-methyl hydantoin,
dichlorohydantoin, salts or hydrates thereof, and mixtures thereof.

28. (Withdrawn) A composition according to claim 23, wherein the
bleaching/antimicrobial agent comprises at least one of hydrogen peroxide, hydrogen peroxide
adduct, ozone, group IIIA active oxygen compound, group VIA active oxygen compound, group
VA active oxygen compound, group VIIA active oxygen compound, and mixtures thereof.

29. (Withdrawn) A composition according to claim 23, wherein the
bleaching/antimicrobial agent comprises at least one of a peroxycarboxylic acid, an ester of
peroxycarboxylic acid, an alkaline metal salt of a peroxycarboxylic acid, and adducts thereof.

30. (Withdrawn) A composition according to claim 23, wherein the
bleaching/antimicrobial agent comprises at least one of C₁-C₁₀ aliphatic peroxycarboxylic acid,
salt of C₁-C₁₀ aliphatic peroxycarboxylic acid, ester of C₁-C₁₀ aliphatic peroxycarboxylic acid,
and mixture thereof.

31. (Withdrawn) A composition according to claim 23, wherein the
bleaching/antimicrobial agent comprises peroxyectanoic acid.

32. (Withdrawn) A composition according to claim 23, further comprising an
activator.

33. (Withdrawn) A laundry washing machine comprising:

(a) a drum having an interior for holding laundry;

- (b) a motor constructed and arranged for rotating the **drum**;
- (c) a water inlet for **introducing** water into the drum **interior**;
- (d) a chemical inlet **for** introducing chemicals into the **drum interior**;
- (e) a drain for **allowing** fluid to drain from the drum **interior**; and
- (f) a processing unit constructed for operating the **laundry washing machine**

to provide a washing cycle for washing laundry with a detergent use solution, a rinsing cycle for removal of at least a portion of the detergent use solution, and a treatment cycle for treating laundry with a bleaching and antimicrobial composition at a first pH that favors bleaching properties and at a second pH that favors antimicrobial properties.

34. (Withdrawn) A laundry wash machine according to claim 32, further comprising:

- (a) a second chemical inlet for introducing a pH adjusting agent into the drum interior.